

Remarks:

Claims 1-3, 5-7, 9-20, 22-28, and 30-33 are now pending in this application. Applicants have amended claims 1, 13, 15, 18, 24, 28, 30 and 33 and cancelled claim 5 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner objected to amendment submitted April 24, 2008, as not being supported by the specification. In particular, the Examiner asserts that the position and orientation of the second specifying unit is communicated to the robot. Paragraph 0041 of the application as published describes how the robot controller (the second specifying unit) is connected to the robot manipulator making it possible to move the robot arm according to a specified position and orientation. Therefore, the specification supports the recitation of communicating the position and orientation of the second specifying unit to the robot. Accordingly, Applicants respectfully request withdrawal of the objection to the claims.

The Examiner objected to claims 15, 18, 24, and 28. The objection to claims 15 and 28 is no longer relevant since the passage objected to by the Examiner is no longer present. Applicants have amended claims 18 and 24 to ensure that antecedent basis exists for all elements. Accordingly, Applicants respectfully request withdrawal of the objection to the claims.

The Examiner rejected claims 1-7, 9-20, 22-28, 30 and 33 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent publication 2003/0179308 to Zamorano in view of U.S.

patent publication 2002/0010734 to Ebersole et al. and U.S. patent 5,155,683 to Rahim. The Examiner rejected claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Zamorano in view of Ebersole et al. and Rahim and further in view of U.S. patent 5,815,411 to Ellenby.

The combination of Zamorano, Ebersole et al. and Rahim does not suggest the claimed invention since, among other things, the combination does not suggest a system for remote programming of an industrial robot that includes a first specifying unit located at a site remote to a robot and configured to specify a position and an orientation in the remote site in relation to a fixed remote coordinate system. Zamorano et al. only suggests a tracking a robot on a display that is connected to the robot.

While Ebersole et al. may suggest a remote station, Ebersole et al. only suggests an instructor located at the remote station. The instructor does not employ a first specifying unit located at a site remote to a robot and configured to specify a position and an orientation in the remote site in relation to a fixed remote coordinate system. Ebersole et al. suggests a head mounted camera at a local site, as shown in Fig. 4. The remote instructor is not specifying an orientation and position of the camera or anything else, such as a robot.

On the other hand, Rahim only suggests remote control of a vehicle. An operator views an image from a camera mounted on the vehicle. Rahim does not suggest a system for remote programming of an industrial robot that includes a first specifying unit located at a site remote to a robot and configured to specify a position and an orientation in the remote site in relation to a

fixed remote coordinate system.

Particularly since none of Zamorano, Ebersole et al. and Rahim suggests a first specifying unit as described above, none of Zamorano, Ebersole et al. and Rahim suggests a first registering unit adapted to register the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit, and a display adapted to display the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit. These aspects of the claimed invention are shown in Fig. 1 and described in the related description. As the first specifying unit is moved, the movement is registered and displayed on the display in the augmented reality image. It follows that none of Zamorano, Ebersole et al. and Rahim suggests a second specifying unit configured to specify a position and an orientation of the robot at the local site in relation to a local coordinate system, wherein a position and orientation of the robot is dependent on the position and orientation specified by the first specifying unit in the remote coordinate system.

In view of the above, the combination of Zamorano, Ebersole et al. and Rahim does not suggest the invention recited in claims 1-3, 5-7, 9-20, 22-28, 30 and 33.

The combination of Zamorano, Ebersole et al., Rahim and Ellenby does not suggest the invention recited in claims 31 and 32 since, among other things, Ellenby does not overcome the above-discussed deficiencies of Zamorano, Ebersole et al. and Rahim. Along these lines, Ellenby does not suggest a system for remote programming of an industrial robot that includes a

first specifying unit located at a site remote to a robot and configured to specify a position and an orientation in the remote site in relation to a fixed remote coordinate system. Additionally, Ellenby does not suggest a first registering unit adapted to register the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit, and a display adapted to display the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit or a second specifying unit configured to specify a position and an orientation of the robot at the local site in relation to a local coordinate system, wherein a position and orientation of the robot is dependent on the position and orientation specified by the first specifying unit in the remote coordinate system. Ellenby et al. only suggests a vision system that displays a view of an area and data stored in a database. Therefore, the combination of Zamorano, Ebersole et al., Rahim and Ellenby does not suggest the present invention as recited in claims 31 and 32.

In view of the above, the references relied upon in the office action do not suggest patentable features of the claimed invention. Therefore, the references relied upon in the office action do not make the claimed invention obvious. Accordingly, Applicants respectfully request withdrawal of the rejections based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and issuance of the Notice of Allowance.

If an interview would advance the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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/Eric J. Franklin/
Eric J. Franklin, Reg. No. 37,134
Attorney for Applicants
Venable LLP
575 7th Street, NW
Washington, DC 20004
Telephone: (202) 344-4936